## ABSTRACT OF THE DISCLOSURE

A first carcass ply (3) is formed by depositing onto a toroidal support (11), strip-like lengths (13) cut to size from a continuous strip-like element and each longitudinal thread-like elements 5 comprising incorporated into a layer of elastomer material (17). The strip-like lengths are laid down sequentially in mutual circumferential side by side relationship, to form side portions (25) partly superposed on each other and crown 10 portions (24) in mutual circumferential side by side relationship. Associated with the carcass ply (3) are annular structures (4) comprising a first and a second circumferentially inextensible annular inserts (27, 28) and an elastomer filling (29) interposed therebetween. A 15 second carcass ply (31) is made in superposed position to the first carcass ply (3) and the amnular structures (4). A belt structure (5), a tread band (8) and sidewalls (9) are combined with the carcass structure (2) thus formed, to define a tire (1) to be vulcanized.

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